REMARKS

I. Introduction

In response to the Office Action dated August 2, 2004, claims 1, 9 and 17 have been amended. Claims 1-24 remain in the application. Re-examination and re-consideration of the application is requested.

II. Prior Art Rejections

A. The Office Action Rejections

In paragraphs (2)-(3) of the Office Action, claims 1-24 were rejected under 35 U.S.C. §102(a) as being anticipated by Sheard et al., U.S. Patent No. 6,208,345 B1 (Sheard).

Applicants' attorney respectfully traverses these rejections, in view of the amended claims above and the arguments below.

B. The Applicants' Independent Claims

Independent claims 1, 9, and 17 are generally directed to developing multi-tier business applications. The computer-implemented system of claim 1 is representative, and comprises an Integrated Development Environment (IDE), executed by a computer, for creating and maintaining a multi-tier business application on a multiple tier computer network, wherein the IDE includes a Topological Multi-Tier Business Application Composer that is used by a developer to graphically design, develop, maintain, build, test, debug, and deploy the multi-tier business application, the Composer includes a window and a palette, the palette contains graphical constructs representing tiers and components of the tiers that are used to design, develop, maintain, build, test, debug, and deploy a graphical presentation of the multi-tier business application in the window, and when creating the multi-tier business application, the developer decides on a number of tiers, identifies workstations and servers within each of the tiers, and defines processing performed by each tier and its components.

C. The Sheard Reference

A visual data integration system architecture and methodology is disclosed. The system architecture includes a transport framework that represents a technology-independent integration mechanism that facilitates the exchange of technology-dependent data between disparate applications. A visual interface facilitates the design, deployment, and runtime monitoring of an

integrated information system implementation. An integrated information system is developed visually through use of the visual interface by dragging and dropping components within a canvas area of the interface. The components are graphical representations of various telecommunications hardware and software elements, such as information stores, processors, input/output devices and the like. Various components may be packaged together as business extension modules that provide specific business integration capabilities. Interconnections between components are graphically established using a mouse to define sources and destinations of specified data. An underlying configuration/runtime information framework operating above and in concert with the transport framework effectively transforms the graphical interconnections into logical or physical interconnections, which results in the contemporaneous generation of an integrated runtime system. Format neutral data meta-models are employed to model the input and output data requirements of disparate systems and system components so as to remove any cross-dependencies that exist between the systems and technologies implicated in a data integration project. The visual interface enables runtime control and analysis of the business information and system aspects of an integrated system implementation. Visual views onto the live deployment provide consistent management and control for system integrators, business integrators, system managers, and business managers using a single visual interface.

D. The Applicants' Invention is Patentable Over the References

The Applicants' invention, as recited in independent claims 1, 9, and 17 is patentable over the references, because it contains limitations not taught by the references.

Specifically, the references do not teach or suggest the specific combination of limitations found in the independent claims, including the limitations "when creating the multi-tier business application, the developer decides on a number of tiers, identifies workstations and servers within each of the tiers, and defines processing performed by each tier and its components."

The Office Action, on the other hand, asserts the following with regard to dependent claims 4, 12 and 20:

> Per claims 4, 12, and 20:
> -the composer is used to perform one or more actions selected from a group comprising:
> (Col. 22, lines 3-5, "The information n the project file is used by the visual interface to render a picture of a data integration implementation (actions) on its canvas", col. 22, lines 60-62, "...layout of a data integration project is defined within

the canvas of the visual interface...")

-creating the tiers involved in the multi-tier business application;

(Col. 24, line 51-col. 25, line 16, "The integration of data across multiple platforms and multiple workstations is coordinated through the use of a distribution planning facility... distribution planning panel.. .provides a tree view of the network environment. .. workstations ...components...")

-specifying the components of each of the tiers;

(Col. 23, lines 10-13, "...the user designs a data integration layout when the System Integration view is active by selecting various adapters and components (specifying the components of the tiers) displayed in the palette. ..")

-specifying properties that identify each of the tiers and the components of the tiers.

(Col. 25, lines 17-22, "The right portion of the distribution planning panel includes a property sheet which is used to show the data associated with a selected item...property sheet presents configuration data...")

Applicants' attorney respectfully submits that the identified portions of Sheard do not anticipate or render obvious Applicants' independent claims. For example, at the indicated locations, Sheard merely discloses the following:

Sheard: Col. 22, lines 3-5 (actually Col. 21, line 54 – Col. 22, line 5)

FIGS. 25A-25F define a directory structure of the configuration and runtime information framework 503 within which configuration files are placed and manipulated in accordance with one embodiment of the present invention. Examples # 3-# 5 provided hereinbelow provide the content of the various configuration files in accordance with this embodiment. The three primary types of configuration files are project files (see Example # 3), component instance configuration files (see Example # 4), and component configuration files (see Example # 5). There is typically one project file associated with each data integration implementation. The project file contains the top-level definition of the adapters that are part of a data integration implementation and defines how the adapters are structurally connected together. Included in the project file are references to the component and component instance configuration files of a given deployment. The information in the project file is used by the visual interface 501 to render a picture of a data integration implementation on its canvas 540.

Sheard: Col. 23, lines 10-13 (actually lines 10-20)

In typical use, the user designs a data integration layout when the System Integration view is active by selecting various adapters and components displayed in the palette 530 of the visual interface 501. This is achieved by dragging selected adapters from the palette 530 and dropping them onto the canvas 540 using a mouse or other input device. This operation results in the creation of a new entry for the selected adapter in the project file and, additionally, results in the creation of an instance configuration file in the projects directory using a copy of the default configuration derived from the component configuration file.

Sheard: Col. 24, line 51-col. 25, line 16

The integration of data across multiple platforms and multiple workstations is coordinated through the use of a distribution planning facility. Activating the Xchange button 544 results in the presentation of a menu item which permits the user to invoke a distribution planning panel. The distribution planning panel 550, an embodiment of which is shown in FIG. 19, includes a panel 552 that provides a tree view of the network environment currently in operation for a selected data integration project. Each node in the first level 554 of the tree represents the name of a project. The second level nodes 556 under the project nodes 554 indicate the names of the workstations on which specified components are operating. A third level of nodes 558 indicates the various components operating on a particular workstation. A fourth level of nodes 560 indicates details of either component or queue elements defined on the third level of nodes 558. For example, the components shown in panel 552 of FIG. 19 includes six individual adapters, namely, CGI, ODBC, Mail, Printer, Pager, and Monitor adapters. The Monitor adapter represents a monitoring process node that is typically distinguished from other adapter nodes in terms of color or font. It is noted that the network file system mapping used to access remote machines is typically set by a system administrator outside of the visual interface environment.

The distribution planning panel 550 retrieves and stores information from the project file. The canvas 540 of the main visual interface panel 501 also uses the project file. In this regard, the distribution planning panel 550 and canvas 540 of the main visual interface panel 501 represent the same deployment from two different perspectives. The distribution planning panel 550 is used from the global navigation point of view, while the canvas 540 of the main visual interface panel 501 is used from the data flow point of view.

Sheard: Col. 25, lines 17-22 (actually lines 17-32)

The right portion of the distribution planning panel 550 includes a property sheet 562 which is used to show the data associated with a selected item. More specifically, the property sheet 562 presents configuration data, error/alert log information, and a performance data graph for a selected component process or monitoring process. For example, the property sheet of a selected queue shows various queue properties, including queue contents in a table format and queue monitoring data in a graphical format. Certain data, such as error/alert logs, performance data graphs, queue views, and queue monitoring data, presented in the property sheets 562 are read-only displays. The operations a user may perform using the property sheet 562 include, for example, deleting a queue entry from a queue, flushing a queue, changing the configuration for a component, and changing the configuration for queue monitoring.

The above portions of Sheard do not teach or suggest deciding on the number of tiers, identifying workstations and servers within each of the tiers, and defining processing performed by each tier and its components. Indeed, nothing in Sheard refers to tiers.

Thus, the Sheard does not anticipate or render obvious Applicants' claimed invention. Moreover, the various elements of Applicants' claimed invention together provide operational advantages over Sheard. In addition, Applicants' invention solves problems not recognized by Sheard.

Applicants' attorney submits that independent claims 1, 9, and 17 are allowable over the references. Further, dependent claims 2-8, 10-16, and 18-24 are submitted to be allowable over the references in the same manner, because they are dependent on independent claims 1, 9, and 17, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2-8, 10-16, and 18-24 recite additional novel elements not shown by the references.

III. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Respectfully submitted,

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